



**STATEMENT OF BASIS**  
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BAQ Engineering Services Division

<b>Company Name:</b>	Sea Fox Boat Company, Inc.	<b>Permit Writer:</b>	Kathleen T. Haddock, P.E.
<b>Permit Number:</b>	TV-0420-0094	<b>Date:</b>	DRAFT

**DATE APPLICATION RECEIVED:** December 29, 2015

**FACILITY DESCRIPTION:** Sea Fox Boat Company, Inc. (SeaFox) operates a boat manufacturing facility in Moncks Corner, SC. SeaFox manufactures fiberglass hulls and decks using an open mold lamination process and assembles them into completed boats. This facility is a major source of HAP and is subject to the applicable requirements of 40 CFR 63, Subpart VVVV (Boat Manufacturing).

**PROJECT DESCRIPTION:** This facility is requesting the renewal of their existing Title V operating permit. The current Title V operating permit was issued on June 14, 2011 and expires on June 30, 2016.

**CHANGES SINCE LAST OP ISSUANCE:** On June 12, 2015, the Department received a Minor Modification request to remove the number of spray guns specified for gelcoat, laminate application chopper, and foam application. The facility requested the flexibility to add guns based on the number of colors to be sprayed. The Minor Modification request has been denied for the following reasons.

After reviewing the general provisions applicable to Subpart VVVV, discussions with the BAQ Air Toxics Division, and the permit flexibility currently in the Title V permit, the addition of gelcoat and laminate application chopper guns will not be allowed without a construction permit. The gelcoat and open molding resin (laminate application chopper guns) operations are defined as affected sources under the MACT. HAP content requirements are specified in Table 2 of the Subpart based on the operation and the application method (i.e., atomized or non-atomized spray). The operation is also subject to the general provisions in 40 CFR 63.5(b)(6) for construction/reconstruction which states: "After the effective date of any relevant standard promulgated by the Administrator under this part, equipment added (or a process change) to an affected source that is within the scope of the definition of affected source under the relevant standard must be considered part of the affected source and subject to all provisions of the relevant standard established for that affected source."

In addition, the PTE of VOC for one gelcoat or laminate application chopper gun exceeds the permitting threshold as defined in SC Regulation 61-62.1, Section II(A) Construction Permits. Emissions Data from the Title V renewal application for Sea Fox indicates that the maximum uncontrolled VOC emissions from gelcoat or lamination are 4.93 lb/hr (21.6 TPY) exceeding the exemption threshold of 1000 lb/month VOC.

Finally, Condition 4.12 of the permit expiring on June 30, 2016 allows only the addition of insignificant or exempt equipment:

- A list of equipment which are considered insignificant pursuant to S.C. Regulation 61-62.70.5(c) has been submitted with your Title V application and reviewed by the Bureau. The list, including source descriptions and citation for insignificant status, is summarized in Attachment B of this permit. Attachment B excludes those activities identified in Section A of the Insignificant Activities List for S.C. Regulation 61-62.70 "Title V Operating Permit Program." Written notification to the Bureau of Air Quality is required for the addition of any new equipment which may meet the definition of insignificant or exempt, excluding those sources listed in Section A of the Insignificant Activities List for S.C. Regulation 61-62.70 "Title V Operating Permit Program." and

3.V.1 expressly states that a facility cannot make a change that is a modification under Title I of the CAA:

- Changes under the Clean Air Act, Section 502(b)(10), are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. A permitted facility is authorized to make section 502(b)(10) changes within its facility without requiring a permit revision, if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit. The permitted facility shall provide the Administrator and the Department written notification as required by S.C. Regulation 61-62.70.7(e)(5) at least seven (7) days prior to such changes.

The foam application guns are not considered affected sources under the MACT and emissions must be evaluated in order to determine permitting applicability under SC Regulation 61-62.1, Section II (A).



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**SPECIAL CONDITIONS, MONITORING, LIMITS:** Standard 5.1 was repealed June 26, 2015. The facility has submitted the Administrative Amendment form (SCDHEC form 2938) (received March 14, 2016) requesting the removal of the existing Standard 5.1 limits. The facility indicated that the removal of the Standard 5.1 limits would not affect compliance with any other limits nor result in any other regulation being triggered. However, the facility will maintain the federally enforceable synthetic minor limit of less than 250 tpy for VOCs.

The repeal of Standard 5.1 will modify the Monitoring and Record Keeping conditions for VOC. In general, LAER was based on the material contents limit in 40 CFR 63, Subpart VVVV and a less than 250 TPY VOC limit was taken for PSD avoidance. The facility will still be subject to all applicable requirements of Subpart VVVV but the VOC recordkeeping requirement will be standardized such that emissions of less than 250 TPY must be demonstrated monthly, based on a 12-month rolling sum.

**EMISSIONS:** Emissions submitted in the Title V application have been reviewed by the Department for accuracy.

The uncontrolled PTE numbers were estimated by using the ratio of the maximum theoretical production to the actual production in a given year, multiplied by the actual emissions for that year.

UNCONTROLLED POTENTIAL EMISSIONS BY SOURCE				
ID	Pollutant	lb/hr	TPY	Method for Estimating Emissions
01	VOC	0.1	0.29	Mass Balance
	Styrene	0.026	0.077	Composite Fabricators Association "Unified Emission Factors for Open Molding of Composites", dated July 23, 2001
	Methyl Ethyl Ketone	0.007	0.022	
02, 03	VOC	88.8	266.4	Mass Balance
	Styrene	71.9	215.5	
	Dimethyl Phthalate	0.01	0.028	
	Methyl Ethyl Ketone	0.36	1.09	
	Methyl Methacrylate	15.82	47.5	Composite Fabricators Association "Unified Emission Factors for Open Molding of Composites", dated July 23, 2001
04	VOC	1.8	5.4	Mass Balance
05	VOC	1.35	4.06	Mass Balance
	Xylene	0.52	1.55	
	Methyl Ethyl Ketone	0.10	0.30	
	Toluene	0.10	0.30	
	Ethyl Benzene	0.11	0.32	
06	PM/PM <sub>10</sub>	1.8	8.0	Engineering Calculations
	PM <sub>2.5</sub>	0.82	3.6	
07	VOC	2.68	8.0	Mass Balance
	Styrene	0.6	1.8	Composite Fabricators Association "Unified Emission Factors for Open Molding of Composites", dated July 23, 2001

FACILITY WIDE EMISSIONS		
Pollutant	Uncontrolled Emissions	Controlled/Limited Emissions
	TPY	TPY
PM/PM <sub>10</sub>	8.06	--
PM <sub>2.5</sub>	3.6	--
VOC	284.1	<250
Dimethyl Phthalate (H,T,V)	0.03	--
Ethyl Benzene (H,T,V)	0.3	--
Methyl Ethyl Ketone (T,V)	1.4	--
Methyl Methacrylate (H, T, V)	47.5	--



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FACILITY WIDE EMISSIONS		
Pollutant	Uncontrolled Emissions	Controlled/Limited Emissions
	TPY	TPY
Styrene (H,T,V)	217.4	--
Toluene (H,T,V)	0.3	--
Xylene (H,T,V)	1.5	--

#### OPERATING PERMIT STATUS

The facility has an active Title V Operating Permit that was issued June 14, 2011. The facility submitted a timely TV renewal application received by the Department on December 29, 2015.

#### REGULATORY APPLICABILITY REVIEW

Regulation	Comments/Periodic Monitoring Requirements								
Section II.E - Synthetic Minor	Not Applicable: The facility has taken a federally-enforceable synthetic minor limit for VOC of less than 250 tpy.								
Standard No. 1	Not Applicable: There are no fuel burning sources at the facility.								
Standard No. 3 (state only)	Not Applicable: This facility does not contain waste combustion or reduction sources.								
Standard No. 4	Applicable: The Cutting and Grinding operation (ID 06) is subject to a PM limit determined by the PWR equation of Section VIII. Other sources at the facility do not emit PM.								
	<table><tr><th>Equipment ID</th><th>Max PWR (tons/hr)</th><th>Allowable PM from PWR Equation (lb/hr)</th><th>Potential (Uncontrolled) PM (lb/hr)</th></tr><tr><td>06</td><td>1.6</td><td>5.6</td><td>1.83</td></tr></table>	Equipment ID	Max PWR (tons/hr)	Allowable PM from PWR Equation (lb/hr)	Potential (Uncontrolled) PM (lb/hr)	06	1.6	5.6	1.83
	Equipment ID	Max PWR (tons/hr)	Allowable PM from PWR Equation (lb/hr)	Potential (Uncontrolled) PM (lb/hr)					
06	1.6	5.6	1.83						
The visible emission limit of Section IX of 20% maximum opacity is applicable facility-wide to each emission point ID for Equipment IDs 01-03 and 05-07. (ID 04 does not vent externally.)									
Standard No. 5	Not Applicable: The facility was not in existence in 1979 or 1980.								
Standard No. 5.2	Not Applicable: There are no fuel burning sources at the facility.								
Standard No. 7	Not Applicable: The facility is potentially a major source for PSD. The facility has established federally-enforceable VOC limits of less than 250 TPY.								
61-62.6	Not Applicable: The facility does not emit any type of particulate emissions defined as fugitive dust in SC Regulation 61-62.1, Section I.								
40 CFR 60 and 61-62.60	Not Applicable: The facility does not operate any sources subject to any subpart under these regulations.								
40 CFR 61 and 61-62.61	Not Applicable: The facility does not emit the pollutants subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).								
40 CFR 63 and 61-62.63	Applicable: This facility is subject to Subpart VVVV – National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing. The facility uses the emissions averaging option (§63.5710) for demonstrating compliance with the MACT standard. The most recent notice of compliance status was received by the Department on February 4, 2013. Since that date there have been no changes at the facility requiring notification.								
61-62.68	Not Applicable: The facility does not use or store regulated materials above the threshold quantities.								
40 CFR 64	Not Applicable: This facility does not operate any control devices for emissions control.								



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**AMBIENT AIR STANDARDS REVIEW**

Regulation	Comments/Periodic Monitoring Requirements
Standard No. 2	The facility previously demonstrated compliance through modeling, as documented on the 4/14/2011 modeling summary sheet. Modeling was submitted with the TV renewal, however the facility has not added new emissions sources, or made stack or facility modifications that would worsen dispersion, or had any emissions increases since the facility's previous compliance demonstration. PM <sub>2.5</sub> was reviewed with this submittal and determined to be exempt from modeling. (Reference modeling summary sheet dated 5/14/2016.)
Standard No. 7.c	The facility previously demonstrated compliance through modeling, as documented on the 4/14/2011 modeling summary sheet. Modeling was submitted with the TV renewal, however the facility has not added new emissions sources, or made stack or facility modifications that would worsen dispersion, or had any emissions increases since the facility's previous compliance demonstration. PM <sub>2.5</sub> was reviewed with this submittal and determined to be exempt from modeling. (Reference modeling summary sheet dated 5/14/2016.)  No baseline date has been established for PM <sub>2.5</sub> in Berkeley County.
Standard No. 8 (state only)	The hazardous air pollutants emitted by this facility are exempt from these requirements per SC Regulation 61-62.5, Standard 8, Section I(D)(1): styrene, dimethyl phthalate, methyl ethyl ketone. (Reference modeling summary sheet dated 5/14/2016.)

**PERMIT SHIELD VARIANCES:**

The facility requested permit shields for the following regulations on the basis that they are applicable to all facilities:

- SC Regulation 61-62.1 Definitions and General Requirements
- SC Regulation 61-62.2: Prohibition of Open Burning
- SC Regulation 61-62.4 Hazardous Air Pollution Conditions
- SC Regulation 61-62.5, Standard No. 2 Ambient Air Quality Standards
- SC Regulation 61-62.5, Standard No. 8 Toxic Air Pollutants
- SC Regulation 61-62.6 Control of Fugitive Particulate Matter
- SC Regulation 61-62.7 Good Engineering Practice Stack Height

The permit shield for these regulations has been denied as Department guidance states that a shield shall not be granted for these regulations for the reason that they are applicable to all facilities.

A permit shield shall also not be granted for the applicable MACT regulation, SC Regulation 61-62.63 and 40 CFR 63 Subpart VVVV - Boat Manufacturing.

**PUBLIC NOTICE**

This Title V Permit will undergo a 30-day public notice period and a 45-day EPA comment period in accordance with SC Regulation 61-62.1, Section II.N. This permit was placed in the Berkeley Independent on June 13, 2016. The comment period was open from June 15, 2016 to July 14, 2016 and was placed on the BAQ website during that time period.

**SUMMARY AND CONCLUSIONS**

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.